



Forest Insect & Disease Management

5220

Detection Report

November 1975

S-21-75

DIPLODIA TIP BLIGHT IN NORTHERN MINNESOTA

During the past year several cases of diplodia tip blight have been reported on red pine in northern Minnesota. This disease organism can also attack Austrian, Scotch, mugo and white pine. Investigations indicate that the fungus is only parasitic on weakened trees, and when the climatic conditions are suitable for spore germination. The disease normally causes mortality of the new growth and may attack trees of any size. Death of the red pine trees is not common, but can result after massive infections.

Symptoms and Signs:

Stunting of new growth with subsequent browning of the foliage are the most common symptoms. Eventually the dead candles turn faded grey. The lower branches are affected first, but browning of tips over the whole tree can be observed in years with a wet spring. The twigs are usually killed back to the first node where cankers may be formed. Small black fruiting bodies break through the epidermis of the needle or stems of recently killed host tissue.

Pathogen:

The fungus Diplodia pinea causes the tip blight. The organism overwinters in the infected needles and twigs. The spores are released in late spring and early summer. They are spread by wind and rain to healthy needles and twigs where the fungus destroys the shoot to the first node.



Shoot mortality to first node. Note line between dead pitchy area and healthy tissue by arrow. (Red Pine)



Small black fruiting bodies on needles. (Red Pine)

By: ROBERT L. ANDERSON, Pathologist
St. Paul Field Office

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Control:

1. Pruning and burning of infected shoot and 6" of healthy wood below is effective in reducing the disease. (Pruning should be done during dry periods to prevent spreading the fungus on the pruning tools.)
2. Applications of Bordeaux mixture plus a spreader sticker at bud break, when needle emerge from sheath and when needles are half grown has been effective in controlling the disease, but applications would have to be made yearly.
3. An application of 12-8-4 fertilizer has been shown to be effective in increasing tree vigor and reducing disease incidence.

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